

SEIZURE SENSING AND DETECTION USING AN IMPLANTABLE DEVICE**Patent number:** CA2456443**Publication date:** 2003-01-09**Inventor:** ARCHER STEPHEN T (US); PLESS BENJAMIN D (US); BAYSINGER CRAIG M (US); GIBB BARBARA (US); TCHENG THOMAS K (US); KIRKPATRICK BRUCE (US); GURUNATHAN SURESH K (US)**Applicant:** NEUROPACE INC (US)**Classification:****- international:** A61B5/0476; A61B5/0476; (IPC1-7): A61B5/00; A61B5/0476; A61N1/36; G06F17/00**- european:** A61B5/0476**Application number:** CA20022456443 20020628**Priority number(s):** US20010896092 20010628; WO2002US20630 20020628**Also published as:**

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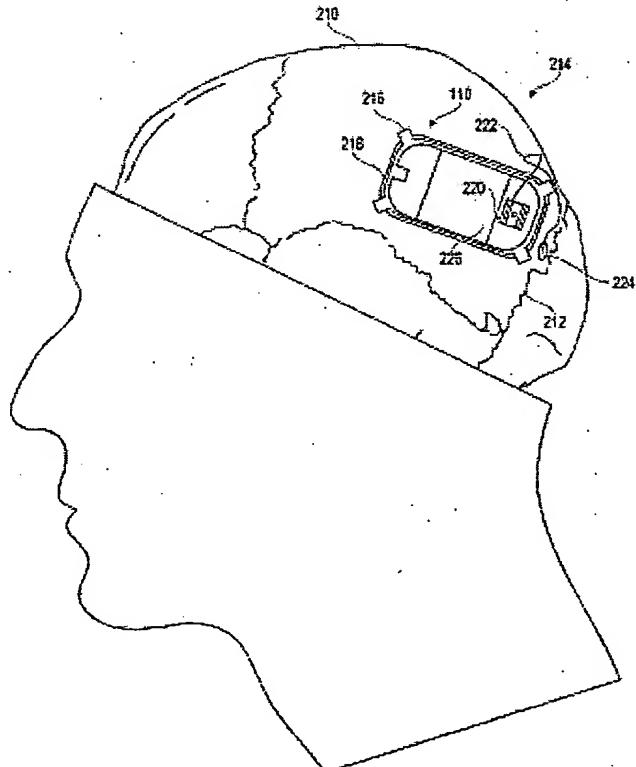
EP1404216 (A2)



US6810285 (B2)

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A system and method for detecting and predicting neurological events with an implantable device (110) uses a relatively low-power central processing unit (428) in connection with signal processing circuitry (422) to identify features (including half waves) and calculate window-based characteristics (including line lengths and areas under the curve of the waveform) in an electrographic signal received from a patient's brain. The features and window-based characteristics are combinable in various ways according to the invention to detect and predict neurological events in real time, enabling responsive action by the implantable device.



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